

WHAT IS CLAIMED IS:

1. A peer-to-peer communication system, comprising:

at least two peer terminals, each having an application that enables peer terminal users to perform at least one of creating data elements, modifying data elements, and sharing data elements, the application comprising:

a contact creating module that enables the peer terminal users to create contacts, wherein at least one contact is associated with another peer terminal user and wherein the at least one contact is designated as a sharing contact for sharing the data elements;

a permission granting module that enables data element owners to selectively grant permissions to selected sharing contacts, wherein the granted permissions provide predetermined rights to specified data elements; and

a synchronizing module that enables instantaneous propagation of changes made to data elements.

2. The system according to claim 1, wherein the application further comprises an invitation module that enables the peer terminal users to invite selected sharing contacts to participate in a communication.

3. The system according to claim 2, wherein the invitation module informs the corresponding peer terminal users whether or not the selected sharing contacts agreed to participate in the communication.

4. The system according to claim 1, wherein the application further comprises a communications module that enables the peer terminal users to communicate with sharing contacts.

5. The system according to claim 1, further comprising at least one special purpose peer.

6. The system according to claim 5, wherein the at least one special purpose peer comprises at least one of a routing peer, a back-up peer, an authentication peer, a presence peer, and a relay peer.

7. The system according to claim 1, wherein the data elements include other data elements.

8. The system according to claim 1, wherein the data elements include at least one of folders, items stored in folders and folder hierarchy.

9. The system according to claim 1, wherein the data elements are structured in a hierarchical format.

10. The system according to claim 1, wherein the permission granting module further enables the data element owners to extend permissions to the sharing contacts to enable the sharing contacts to share the data elements with other peer terminal users.

11. A peer-to-peer communication system, comprising:
- at least one special purpose peer; and
  - at least two peer terminals, each having an application that enables peer terminal users to perform at least one of creating data elements, modifying data elements, and sharing data elements, the application comprising:
    - a contact creating module that enables the peer terminal users to create contacts, wherein at least one contact is associated with another peer terminal user and wherein the at least one contact is designated as a sharing contact for sharing the data elements;
    - a permission granting module that enables data element owners to selectively grant permissions to selected sharing contacts, wherein the granted permissions provide predetermined rights to specified data elements;
    - a synchronizing module that enables instantaneous propagation of changes made to data elements.

12. The system according to claim 11, wherein the at least one special purpose peer comprises at least one of a routing peer, a back-up peer, an authentication peer, a presence peer, and a relay peer.

13. A peer-to-peer communication system, comprising:

at least two peer terminals, each having an application that enables peer terminal users to perform at least one of creating data elements, modifying data elements, and sharing data elements, the application comprising:

contact creating means for enabling the peer terminal users to create contacts, wherein at least one contact is associated with another peer terminal user and wherein the at least one contact is designated as a sharing contact for sharing the data elements;

permission granting means for enabling data element owners to selectively grant permissions to selected sharing contacts, wherein the granted permissions provide predetermined rights to specified data elements; and

synchronizing means for enabling instantaneous propagation of changes made to data elements.

14. The system according to claim 13, wherein the application further comprises invitation means for enabling the peer terminal users to invite selected sharing contacts to participate in a communication.

15. The system according to claim 14, wherein the invitation means informs the corresponding peer terminal users whether or not the selected sharing contacts agreed to participate in the communication.

16. The system according to claim 13, wherein the application further comprises communications means for enabling the peer terminal users to communicate with sharing contacts.

17. The system according to claim 13, further comprising at least one special purpose peer.

18. The system according to claim 17, wherein the at least one special purpose peer comprises at least one of a routing peer, a back-up peer, an authentication peer, a presence peer, and a relay peer.

19. The system according to claim 13, wherein the data elements include other data elements.

20. The system according to claim 13, wherein the data elements include at least one of folders, items stored in folders and folder hierarchy.

21. The system according to claim 13, wherein the data elements are structured in a hierarchical format.

22. The system according to claim 13, wherein the permission granting means further enable the data element owners to extend permissions to the sharing contacts for enabling the sharing contacts to share the data elements with other peer terminal users.

23. A method of communicating in a peer-to-peer environment having at least two peer terminals, wherein each peer terminal includes an application that enables peer terminal users to perform at least one of creating data elements, modifying data elements, and sharing data elements, the method comprising:

enabling the peer terminal users to create contacts, wherein at least one contact is associated with another peer terminal user and wherein the at least one contact is designated as a sharing contact for sharing the data elements;

enabling data element owners to selectively grant permissions to selected sharing contacts, wherein the granted permissions provide predetermined rights to specified data elements; and

enabling instantaneous propagation of changes made to data elements.

24. The method according to claim 23, further comprising enabling the peer terminal users to invite selected sharing contacts to participate in a communication.

25. The method according to claim 24, further comprising informing the corresponding peer terminal users whether or not the selected sharing contacts agreed to participate in the communication.

26. The method according to claim 23, wherein enabling data element owners to selectively grant permissions to selected sharing contacts further comprises enabling the

data element owners to extend permissions to the sharing contacts to enable the sharing contacts to share the data elements with other peer terminal users.

27. A computer usable medium having computer readable program code embodied therein for causing a computer to communicate in a peer-to-peer environment having at least two peer terminals, wherein each peer terminal includes an application that enables peer terminal users to perform at least one of creating data elements, modifying data elements, and sharing data elements, comprising:

computer readable program code for causing a computer to enable the peer terminal users to create contacts, wherein at least one contact is associated with another peer terminal user and wherein the at least one contact is designated as a sharing contact for sharing the data elements;

computer readable program code for causing the computer to enable data element owners to selectively grant permissions to selected sharing contacts, wherein the granted permissions provide predetermined rights to specified data elements; and

computer readable program code for causing the computer to enable instantaneous propagation of changes made to data elements.

28. The computer usable medium according to claim 27, further comprising computer readable program code for causing the computer to enable the peer terminal users to invite selected sharing contacts to participate in a communication.

29. The computer usable medium according to claim 28, further comprising computer readable program code for causing the computer to inform the corresponding peer terminal users whether or not the selected sharing contacts agreed to participate in the communication.

30. The computer usable medium according to claim 27, wherein enabling data element owners to selectively grant permissions to selected sharing contacts further comprises enabling the data element owners to extend permissions to the sharing contacts to enable the sharing contacts to share the data elements with other peer terminal users.